



**This website uses cookies**

We use cookies to personalise content and ads, to provide social media features and to analyse our traffic. We also share information about your use of our site with our social media, advertising and analytics partners who may combine it with other information that you've provided to them or that they've collected from your use of their services.

**An Error Occurred**

Something is broken. Please let us know what you were doing when this error occurred. We will fix it as soon as possible.

Sorry for any inconvenience caused.

**Necessary**

[Return to the Home Page \(/\)](#)

**Preferences**

**Statistics**

**Marketing**

Show details >

**Website Statistics**

Allow all

**About Encyclopedia**

**MDPI Initiatives**

**44,731** Entries

**708** Videos

Allow selection

[About \(/about\)](#)

[Sciforum](#)

[Advisory Board \(/advisory\\_board\)](#)

[\(http://sciforum.net\)](#)

**5.7M+** Page Views

Deny

[Instructions for Users \(/guideline\)](#)

[MDPI Books](#)

[Help \(/help/center\)](#)

[\(https://www.mdpi.cc\)](#)

[Contact \(/contact\)](#)

[Preprints.org](#)

[Partner \(/partner\)](#)

[\(https://www.preprint\)](#)

[Scilit](#)

[\(https://app.scilit.net\)](#)

[SciProfiles](#)

[\(https://sciprofiles.co\)](#)

[Encyclopedia](#)

[\(https://encyclopedia\)](#)

[JAMS](#)

[\(https://jams.pub/\)](#)

[Proceedings](#)

[Series](#)

Powered by **Cookiebot by Usercentrics** (https://www.cookiebot.com/en/what-is-behind-powered-by-cookiebot/)

[Subscribe](#)

[\(/alert/manage\)](#)




[\(mailto:office@mdpi.com\)](#)

[\(https://www.facebook.com/Encyclopedia-MDPI-102056985743398\)](#)

© 2023 Encyclopedia is subsidized by MDPI (<https://www.mdpi.com>).

[Disclaimer](#) [Terms and Conditions \(/termsofuse\)](#) [Private Policy \(https://www.mdpi.com/about/privacy\)](#)

([/activity/index](#)).

 Feedback

 Top

ncyclopedia

(<https://www.cookiebot.com/en/what-is-behind-powered-by-cookiebot/>).

---

## This website uses cookies

We use cookies to personalise content and ads, to provide social media features and to analyse our traffic. We also share information about your use of our site with our social media, advertising and analytics partners who may combine it with other information that you've provided to them or that they've collected from your use of their services.

---

**Necessary**

**Preferences**

**Statistics**

**Marketing**

---

**Show details** >

Powered by **Cookiebot by Usercentrics** (<https://www.cookiebot.com/en/what-is-behind-powered-by-cookiebot/>)